

Form PTO-1449 (modified)

Atty. Docket No.

UTXC:625US

Serial No.

09/882,805

List of Patents and Publications for Applicant's

Applicant

Peter R.C. Gascoyne *et al.*

## INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

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## U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
93	A1	4,001,102	1/4/97	Batha <i>et al.</i>	204	186	6/23/75
	A2	4,326,934	4/27/82	Pohl	204	180	12/31/79
	A3	4,440,638	4/3/84	Judy <i>et al.</i>	210	198.2	2/16/82
	A4	5,344,535	9/6/94	Betts <i>et al.</i>	204	183.1	4/27/93
	A5	5,454,472	10/3/95	Benecke <i>et al.</i>	209	127.1	8/19/92
	A6	5,489,506	2/6/96	Crane	435	2	2/16/95
	A7	5,569,367	10/29/96	Betts <i>et al.</i>	204	547	1/27/95
	A8	5,571,401	11/5/96	Lewis <i>et al.</i>	205	787	3/27/95
	A9	5,653,859	8/5/97	Parton <i>et al.</i>	204	450	1/21/94
	A10	5,683,569	11/4/97	Chung <i>et al.</i>	205	775	2/28/96
	A11	5,814,200	9/29/98	Pethig <i>et al.</i>	204	547	3/31/94
	A12	5,858,192	1/12/99	Becker <i>et al.</i>	204	547	10/18/96
	A13	5,888,370	3/30/99	Becker <i>et al.</i>	204	643	2/23/96
	A14	5,965,452	10/12/99	Kovacs	436	149	7/9/96
	A15	5,993,630	11/30/99	Becker <i>et al.</i>	204	547	1/31/96
	A16	5,993,631	11/30/99	Parton <i>et al.</i>	204	547	7/8/97
	A17	5,993,632	11/30/99	Becker <i>et al.</i>	204	547	2/1/99
	A18	6,010,616	1/4/00	Lewis <i>et al.</i>	205	787	12/8/97
	A19	6,017,696	1/25/00	Heller	435	6	7/7/94
	A20	6,093,308	7/25/00	Lewis <i>et al.</i>	205	787	2/26/99
	A21	6,099,803	8/8/00	Ackley <i>et al.</i>	422	68.1	2/20/98
	A22	6,113,768	9/5/00	Fuhr <i>et al.</i>	204	643	12/23/94
93	A23	6,129,828	10/10/00	Sheldon, III <i>et al.</i>	204	518	9/6/96

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Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
JS	B17	WO 94/22583	10/13/94	PCT			
	B18	WO 95/13813	5/26/95	PCT			
	B19	WO 96/31282	10/10/96	PCT			
	B20	WO 97/34689	9/25/97	PCT			
JS	B21	WO 99/62622	12/9/99	PCT			

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Exam. Init.	Ref. Des.	Citation
JS	C1	"Bangor biochip heads for California," EPSRC Home Page: <a href="http://www.epsrc.ac.uk/documents/about_epsrc/corporate_publications/bangor.ht">http://www.epsrc.ac.uk/documents/about_epsrc/corporate_publications/bangor.ht</a> , article printed on December 26, 2000.
	C2	"Diagnostic dielectrophoresis-on-a-chip," <i>Science/Technology</i> , 77(8):32, 1999. Article printed from <a href="http://pubs.acs.org/hotartcl/cenear/99022/7708scitobox2.html">http://pubs.acs.org/hotartcl/cenear/99022/7708scitobox2.html</a> on December 26, 2000.
	C3	Allsopp <i>et al.</i> , "Impedance technique for measuring dielectrophoretic collection of microbiological particles," <i>J. Phys. D: Appl. Phys.</i> , 32:1066-1074, 1999.
	C4	Arnold and Zimmermann, "Rotation of an isolated cell in a rotating electric field," <i>Naturwissenschaften</i> 69 297-300, 1982.
	C5	Balachandran <i>et al.</i> , "Electrostatic atomization of conducting liquids using AC superimposed on DC fields," <i>IEEE Transactions on Industry Applications</i> , 30(4):850-854, 1994.
	C6	Becker <i>et al.</i> , "Separation of human breast cancer cells from blood by differential dielectric affinity," <i>Proc. Natl. Acad. Sci. USA</i> , 92(3):860-864, 1995.
	C7	Becker <i>et al.</i> , "The removal of human leukaemia cells from blood using interdigitated microelectrodes," <i>J. Phys. D: Appl. Phys.</i> , 27:2659-2662, 1994.
	C8	Cheng <i>et al.</i> , "Preparation and hybridization analysis of DNA/RNA from <i>E. coli</i> on microfabricated bioelectronic chips," <i>Nature Biotechnology</i> , 16:541-546, 1998.
JS	C9	Davis and Giddings, "Feasibility study of dielectrical field-flow fractionation," <i>Separation Science and Technology</i> , 21(9):969-989, 1986.

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95	C10	De Gasperis <i>et al.</i> , "Microfluidic cell separation by 2-D dielectrophoresis," <i>Biomedical Microdevices</i> , 2:11, 41-49, 1999.
	C11	El-Kishky and Gorur, "Electric field and energy computation on wet insulating surfaces," <i>IEEE Transaction on Dielectrics and Electrical Insulation</i> , 3(4):587-593, 1996.
	C12	El-Kishky and Gorur, "Electric field computation on an insulating surface with discrete water droplets," <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 3(3):450-456, 1996.
	C13	Fuller <i>et al.</i> , "Microfabricated multi-frequency particle impedance characterization system," <i>Micro Total Analysis System</i> , 265-268, May 2000.
	C14	Galicki <i>et al.</i> , "Electrohydrodynamic atomization of dielectric fluids," <i>Conference on Electrical Insulation and Dielectric Phenomena</i> , IEEE Annual Report, 365-368, 1996.
	C15	Gascoyne <i>et al.</i> , "A microfluidic device combining dielectrophoresis and field flow fractionation for particle and cell discrimination," <i>Proceedings of Solid State Sensor and Actuator Workshop, Hilton Head Supplement</i> , 37-38, 1998.
	C16	Gascoyne <i>et al.</i> , "Cell separation by conventional dielectrophoresis combined with field-flow-fractionation," <i>Abstract, 40<sup>th</sup> Annual Meeting of the Biophysical Society</i> , Baltimore, Maryland, P. A333, Tu-Pos412, February 17-21, 1996.
	C17	Gascoyne <i>et al.</i> , "Dielectrophoretic separation of cancer cells from blood," Presented at the Institute for Electrical Engineers Industrial Application Society meeting, Orlando, FL, October 1995, <i>IEEE</i> , 1366-1373, 1995.
	C18	Gascoyne <i>et al.</i> , "Dielectrophoretic separation of cancer cells from blood," <i>IEEE Transactions on Industry Applications</i> , 33(3):670-678, 1997.
	C19	Gascoyne <i>et al.</i> , "Dielectrophoretic separation of mammalian cells studied by computerized image analysis," <i>Meas. Sci. Technol.</i> , 3:439-445, 1992.
	C20	Gascoyne <i>et al.</i> , "Manipulations of erythro leukemia cells using travelling electric fields," <i>Proc. 16th IEEE: Eng. Med. Biol. Soc.</i> , 772-773, 1994.
95	C21	Gascoyne <i>et al.</i> , "Membrane changes accompanying the induced differentiation of friend murine erythro leukemia cells studied by dielectrophoresis," <i>Biochim. Biophys. Acta</i> , 1149:119-126, 1993.

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JS	C22	Gascoyne <i>et al.</i> , "Numerical analysis of the influence of experimental conditions on the accuracy of dielectric parameters derived from electrorotation measurements," <i>Bioelectrochem. Bioenerg.</i> , 36:115-125, 1994.
	C23	Gascoyne <i>et al.</i> , "Use of dielectrophoretic collection spectra for characterization differences between normal and cancerous cells," <i>IEEE Trans. Ind. Appl.</i> , 30:829-834, 1994.
	C24	Gawad <i>et al.</i> , "Impedance spectroscopy cell analysis in microchannels," <i>Micro Total Analysis Systems</i> , 253-255, 2001.
	C25	Gawad <i>et al.</i> , "Micronarcined impedance spectroscopy flow cytometer for cell analysis and particle sizing," <i>Lab on a Chip</i> , 1:76-82, 2001.
	C26	Giddings, "Field-flow fractionation: analysis of macromolecular, colloidal, and particulate materials," <i>Science</i> , 260:1456-1465, 1993.
	C27	Hagendorn <i>et al.</i> , "Travelling-wave dielectrophoresis of microparticles," <i>Electrophoresis</i> , 13:49-54, 1992.
	C28	He <i>et al.</i> , "Droplet charge-to-mass ratio measurement in an EHD liquid-liquid extraction system," <i>IEEE Transactions on Industry Applications</i> , 32(1):146-154, 1996.
	C29	Higashiyama <i>et al.</i> , "Behavior of water droplets located on a hydrophobic insulating plate under DC field," <i>IEEE</i> , 1808-1813, 1998.
	C30	Hoffman and Britt, "Flow-system measurement of a cell impedance properties," <i>J. Histochemistry and Cytochemistry</i> , 27:234-240, 1979.
	C31	Hoffman <i>et al.</i> , "Flow cytometric electronic direct current volume and radiofrequency impedance measurements of single cells and particles," <i>Cytometry</i> , 1:377-384, 1981.
	C32	Hölzel and Lamprecht, "Dielectric properties of yeast cells as determined by electrorotation," <i>Biochim. Biophys. Acta</i> 1104:195-200, 1992.
	C33	Hosokawa <i>et al.</i> , "Handling of picoliter liquid samples in a Poly(dimethylsiloxane)-based microfluidic device," <i>Anal. Chem.</i> , 71:4781-4785, 1999.
JS	C34	Huang <i>et al.</i> , "Application of AC electrokinetics for cell characterization and manipulation," <i>Abstract</i> , 40 <sup>th</sup> Annual Meeting of the Biophysical Society, Baltimore, Maryland, P. A334, Tu-Pos413, February 17-21, 1996.

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Exam. Init.	Ref. Des.	Citation
93	C35	Huang <i>et al.</i> , "Differences in the AC electrodynamics of viable and non-viable yeast cells determined through combined dielectrophoresis and electrorotation studies," <i>Phys. Med. Biol.</i> , 37(7):1499-1517, 1992.
	C36	Huang <i>et al.</i> , "Electrokinetic behaviour of colloidal particles in travelling electric fields: studies using yeast cells," <i>J. Phys. D: Appl. Phys.</i> 26:1528-1535, 1993
	C37	Huang <i>et al.</i> , "Electrorotational studies of the cytoplasmic dielectric properties of Friend murine erythroleukaemia cells," <i>Phys. Med. Biol.</i> , 40:1789-1806, 1995.
	C38	Huang <i>et al.</i> , "Introducing dielectrophoresis as a new force field for field-flow fractionation," <i>Biophys. J.</i> , 73:1118-1129, 1997.
	C39	Huang <i>et al.</i> , "The removal of human breast cancer cells from hematopoietic CD34+ stem cells by dielectrophoretic field-flow-fractionation," <i>J. of Hematotherapy &amp; Stem Cell Research</i> , 8(5): 481-490, 1999.
	C40	Huneiti <i>et al.</i> , "Harmonic spraying of conducting liquids employing AC-DC electric fields," <i>IEEE Transactions on Industry Applications</i> , 34(2):279-285, 1998.
	C41	Jinsart <i>et al.</i> , "Inhibition of myosin light chain kinase, cAMP-dependent protein kinase, protein kinase C and of plant CA-dependent protein kinase by anthraquinones," <i>Biological Chemistry</i> , 373:903-910, 1992.
	C42	Jones and Kallio, 'Dielectrophoretic levitation of spheres and shells,' <i>J. Electrostat.</i> , 6:207-224, 1979.
	C43	Jones, <i>Electromechanics of Particles</i> , Cambridge University Press, Cambridge, Chapter 3:34-82, 1995.
	C44	Kashyap and Gratzl, "Electrochemistry in microscopic domains. 1. The electrochemical cell and its voltammetric and amperometric response," <i>Anal. Chem.</i> , 70:1468-1476, 1998.
	C45	Kloes and Koenig, "Basic investigation of the performance of droplets on electrically stressed polymer surfaces," <i>Conference on Electrical Insulation and Dielectric Phenomena</i> , IEEE Annual Report, 374-377, 1997.
	C46	Lee and Kim, "Liquid micromotor driven by continuous electrowetting," <i>IEEE</i> , 538-543, 1998.
93	C47	Marx and Pethig, "Dielectrophoretic separation of cells: continuous separation," <i>Biotechnology and Bioengineering</i> , 45:337-343, 1995.

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<i>JS</i>	C48	Markx <i>et al.</i> , "Dielectrophoretic characterization and separation of micro-organisms," <i>Microbiol.</i> , 140:585-591, 1994.
	C49	Massey, "Mechanics of Fluids," 2 <sup>nd</sup> Edition, 136-139, 1975.
	C50	Metwally, "Electrostatic charging and modeling of aqueous sprays and fission of droplets," <i>Conference on Electrical Insulation and Dielectric Phenomena</i> , IEEE Annual Report, 117-120, 1996.
	C51	Mizuno <i>et al.</i> , "Behavior of water droplets on silicone rubber sheet under AC voltage application," <i>IEEE</i> , 96-99, 1998.
	C52	Moesner <i>et al.</i> , "Electrostatic devices for particle microhandling," <i>IEEE Transactions on Industry Applications</i> , 35(3):530-536, 1999.
	C53	Sathuvalli and Bayazitoglu, "The lorentz forces on an electrically conducting sphere in an alternating magnetic field," <i>IEEE Transactions on Magnetics</i> , 32(2):386-399, 1996.
	C54	Sato <i>et al.</i> , "Experimental investigation of droplet formation mechanisms by electrostatic dispersion in a liquid-liquid system," <i>IEEE Transactions on Industry Applications</i> , 33(6):1527-1534, 1997.
	C55	Sato <i>et al.</i> , "Production of oil/water type uniformly sized droplets using a convergent AC electric field," <i>IEEE Transactions on Industry Applications</i> , 32(1):138-145, 1996.
	C56	Vennard, "Elementary Fluid Mechanics," 150-155, 1954.
	C57	Wang <i>et al.</i> , "A theoretical method of electrical field analysis for dielectrophoretic electrode arrays using Green's theorem," <i>J. Phys. D: Appl. Phys.</i> , 29:1649-1660, 1996.
	C58	Wang <i>et al.</i> , "A Unified theory of dielectrophoresis and travelling wave dielectrophoresis," <i>J. Phys. D: Appl. Phys.</i> , 27:1571-1574, 1994.
	C59	Wang <i>et al.</i> , "Changes in Friend murine erythroleukaemia cell membranes during induced differentiation determined by electrorotation," <i>Biochimica et Biophysica Acta</i> , 1193:330-334, 1994.
<i>JS</i>	C60	Wang <i>et al.</i> , "Dielectrophoretic manipulation of cells using spiral electrode arrays," <i>Abstract</i> , 40 <sup>th</sup> Annual Meeting of the Biophysical Society, Baltimore, Maryland, p. A333, Tu-Pos411, February 17-21, 1996.

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